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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------|-------------|----------------------|---------------------|------------------|
| 10/073,397 | 02/12/2002 | Tsuyoshi Oki | 24904 | 5135 |
| 20529 | 7590 | 11/24/2004 | EXAMINER | |
| WAMSLEY, PATRICK G | | | | |
| ART UNIT | | PAPER NUMBER | | |
| | | 2819 | | |

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

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|------------------------------|--------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/073,397 | OKI ET AL. |
| | Examiner Patrick G. Wamsley | Art Unit 2819 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 October 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-30 is/are pending in the application.
 4a) Of the above claim(s) 1,2,4,5 and 8-30 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 3,6 and 7 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 12 February 2002 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 02/12/2002.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____.

DETAILED ACTION

Election of Species

Claims 1-2, 4-5, and 8-30 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election of the species depicted in Figures 4A-5A, readable upon claims 3, 6, and 7 was made **without** traverse in the reply filed on 10/15/2004.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Admitted Prior Art, hereafter APA, in view of U.S. Patent 6,772,386 to Iwata et al, hereafter Iwata.

For claim 3, APA discloses a method for using a plurality of coding tables to subject an input data word of p-bits to p-q modulation [EFM and EFM+ modulation are disclosed as conventional] and to thereby obtain a code word of q-bits ($q > p$), in which a plurality of coding tables store the code words corresponding to the respective input data words, including inner [PI] and outer [PO] information in ECC blocks, as shown in Figure 1.

However, APA does not use a sync signal having a bit pattern longer than the maximum run length. In contrast, Iwata discloses the use of frame sync codes as the recited sync signal, having a bit pattern longer than the maximum run length. At the time of the invention, it would have been obvious to one of ordinary skill in the art to have applied Iwata's sync signal teachings to APA. The motivation would have been to increase the maximum burst-error correctable length relatively easily without increasing redundancy [column 2, lines 10-12].

For claim 6, Iwata arranges ECC blocks into first and second rows [column 4, lines 2-5].

For claim 7, Iwata switches odd-numbered and even-numbered data units [column 4, lines 45-52].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,732,328 to McEwen et al describes ECC block encoders [12] and decoders [24]. U.S. Patent 6,718,510 to Kojima separates even and odd numbered rows of data blocks. U.S. Patent 6,266,318 to Honda et al discloses even and odd numbered ECC blocks having divided address information. U.S. Patent 6,175,943 to Yim provides frame sync [24] and ID sync [25] number generators for ECC blocks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick G. Wamsley whose telephone number is (571) 272-1814. The official facsimile number is (703) 872-9306.


Patrick G. Wamsley
November 16, 2004